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Removing gas from inside heart - involves hollow needle inserted through

skin and connected to pump

Patent Assignee: EVANS P H (EVAN-I)

Inventor: EVANS P H

Number of Countries: 006 Number of Patents: 008

Patent Family:

Patent No Kind Date Applicat No Kind Date Main IPC
DE 3831540 A 19890406 DE 3831540 A 19880916
FR 2620337 A 19890317
GB 2209678 A 19890524 GB 8821226 A 19880909
US 4834707 A 19890530 US 8798226 A 19870916
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Priority Applications (No Type Date): US 8798226 A 19870916 Patent Details:

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DE 3831540 A 9 US 4834707 A 10

DE 3831540 C2 11

Abstract (Basic): DE 3831540 A

The instrument is for the mechanical strengthening of the heart and improving the condition, at least temporarily, of heart defects such as congestion. The instrument consists of a hollow needle which is inserted through the skin into a chamber of the heart.

The proximal end of the needle is connected to a pump which removes gas which has accumulated in the heart chamber. The needle has a filter to prevent the outflow of blood.

USE/ADVANTAGE - The presence of gas in the heart chambers reduces the rate at which the heart can pump blood. Removal of the gas increases the pumping efficiency of the heart.

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Abstract (Equivalent): DE 3831540 C

The instrument is for the mechanical strengthening of the heart and improving the condition, at least temporarily, of heart defects such as congestion. The instrument consists of a hollow needle which is

inserted through the skin into a chamber of the heart.

The proximal end of the needle is connected to a pump which removes gas which has accumulated in the heart chamber. The needle has a filter to prevent the outflow of blood.

USE/ADVANTAGE - The presence of gas in the heart chambers reduces the rate at which the heart can pump blood. Removal of the gas increases the pumping efficiency of the heart. (9pp Dwg.No.0/10) Abstract (Equivalent): GB 2209678 B

Blood gas venting apparatus comprising an elongate tubular housing adapted for introduction into a heart chamber and having an inlet and an outlet and a tip adapted to puncture the skin, filter means within said housing to permit the passage of gases and to prevent the passage of liquids into said housing, said filter means being removably retained in said housing and replaceable without removing said housing tip from the skin, flexible conduit means communicating with the interior of said housing for venting gases from the heart, attachment means for connecting pumping means to said flexible conduit means outside the skin to facilitate removal of gases and stop means to halt flow through said flexible conduit.

Abstract (Equivalent): US 4834707 A

The apparatus for mechanically enhancing heart functions has an elongated hollow tubular housing having an inlet and an outlet and a tip adapted to puncture the skin. There is a filter within the housing adequate to permit the passage of gases and prevent the passage of liquids into the housing. A flexible conduit communicates with the interior of the housing for venting gases from the heart.

The filter is removably retained in the housing and replaceable without removing the housing tip from the skin. A removable guide is positioned within the flexible conduit. An attachment connects the pump to the flexible conduit means outside the skin to facilitate removal of gases. (10pp)e

Derwent Class: P34

International Patent Class (Main): A61M-001/10 International Patent Class (Additional): A61M-001/34